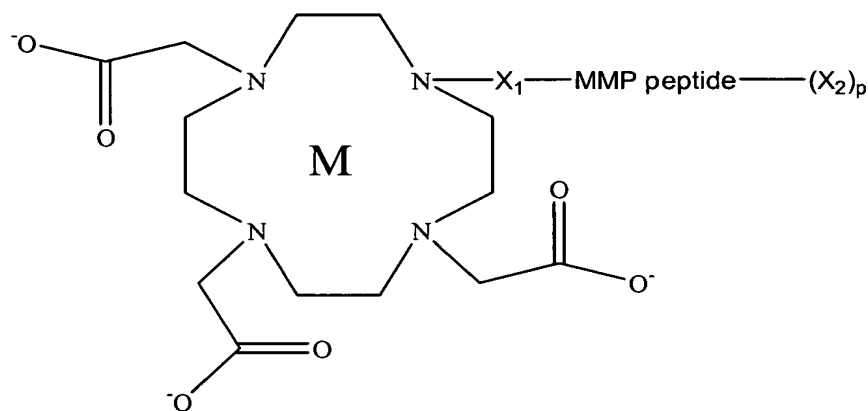We claim:

1.   An MRI agent comprising:

      a) a paramagnetic metal ion;

      b) a chelator; and

      c) a matrix metalloproteinase (MMP) active peptide, covalently attached to said chelator;

such that upon interaction of said agent and an MMP, the T_1 of said agent is decreased.

2. An MRI agent according to claim 1 wherein said chelator is DOTA.

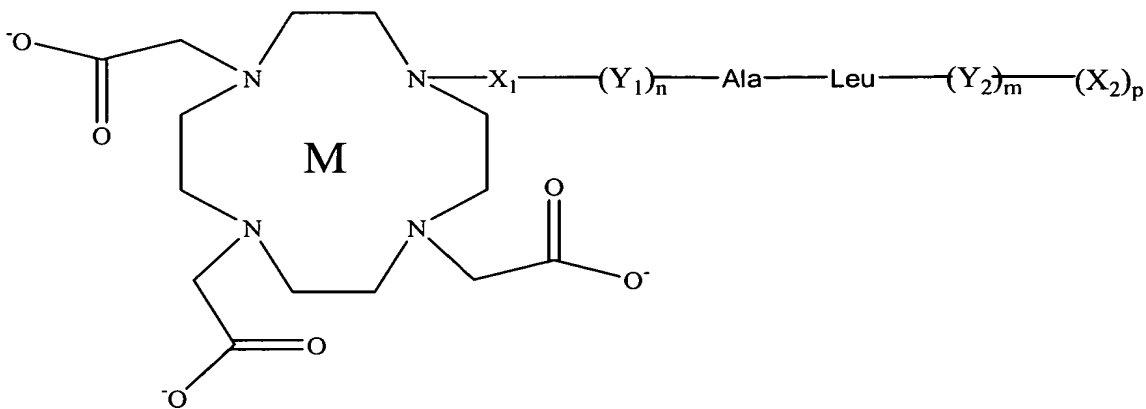3.   An MRI agent according to claim 1 having the formula:

wherein

M is a paramagnetic metal ion selected from the group consisting of Gd(III), Fe(III), Mn(II), Y(III), Cr(III), Eu(III), and Dy(III);

X_1 and X_2 are each independent linkers;

p is an integer from 0 to 1; and

wherein said MMP peptide binds matrix metalloproteinases;

and salts thereof.

4.   An MRI agent according to Claim 1, having the formula:

wherein

Y_1 and Y_2 are independently amino acid moieties; and

n and m are each independently an integer from 0 to 5;

and salts thereof.

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5.   An MRI agent according to Claim 3 or 4, wherein said M is Gd(III).

6.   An MRI agent according to Claim 3 or 4, wherein X_1 is selected from the group consisting of an aryl or alkyl group.

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7. An MRI agent according to claim 6 wherein said alkyl is selected from the group consisting of substituted alkyl, heteroalkyl and substituted heteroalkyl.

8. An MRI agent according to claim 6 wherein said aryl is selected from the group consisting of

15   substituted aryl, heteroaryl and substituted heteroaryl.

9.   An MRI agent according to Claim 3 or 4, wherein X_2 is selected from the group consisting of an aryl group, an alkyl group, a carbohydrate group, a nucleic acid group, a lipid group, and combinations thereof.

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10.   An MRI agent according to Claim 4, wherein X_1 is $-(CH_2CO)-$, Y_1 is −Pro-Met- when n = 2, Y_2 is −Trp-Met-Arg when m = 3., and p = 0.

11.   An MRI agent according to Claim 4, wherein X_1 is $-(CH_2CO)-$, Y_1 is -Met- when

25   n = 1, Y_2 is −Trp-Met-Arg when m = 3, and p= 0.

12.   An MRI agent according to Claim 4, wherein X_1 is $-(CH_2CO)-$, n = 0, Y_2 is −Trp-Met-Arg when m = 3, and p=0.

30   13.   A method comprising administering an MRI agent of claim 1, 3 or 4 to a cell, tissue or patient and producing and magnetic resonance image of said cell, tissue or patient.

14.   A method comprising administering an MRI agent of claim 1, 3 or 4 to a cell, tissue or patient under conditions wherein said MMP peptide interacts with an MMP such that the T1 of said agent is

35   decreased, and producing and magnetic resonance image of said cell, tissue or patient.

15.   A method comprising:

a) contacting an MRI agent of claim 1, 3 or 4 with an MMP such that the T1 of said MRI agent is decreased,

40   b) producing and magnetic resonance image.

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12. A method according to Claim 14, wherein said MMP is MMP 7.

13. A method according to Claim 14, wherein said M is Gd(III).

14. A method according to Claim 14, wherein X_1 is selected from the group consisting of an aryl or alkyl group selected from the group consisting of substituted alkyl, heteroalkyl, substituted heteroalkyl, substituted aryl, heteroaryl and substituted heteroaryl.

15. A method according to Claim 14, wherein X_2 is selected from the group consisting of an aryl group, an alkyl group, a carbohydrate group, a nucleic acid group, a lipid group, and combinations thereof.

16. A method according to Claim 14, wherein X_1 is $-(CH_2CO)-$, Y_1 is $-Pro-Met-$ when $n = 2$, Y_2 is $-Trp-Met-Arg$ when $m = 3.$, and $p = 0$.

17. A method according to Claim 14, wherein X_1 is $-(CH_2CO)-$, Y_1 is -Met- when $n = 1$, Y_2 is $-Trp-Met-Arg$ when $m = 3$, and $p = 0$.

18. A method according to Claim 14, wherein X_1 is $-(CH_2CO)-$, $n = 0$, Y_2 is $-Trp-Met-Arg$ when $m = 3$, and $p=0$.